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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,130	05/06/2004	Daniel Scott Homa	062003-1	7234
7590	12/10/2004		EXAMINER PENG, CHARLIE YU	
Wendy W. Koba P.O. Box 556 Springtown, PA 18081			ART UNIT 2883	PAPER NUMBER

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/840,130	HOMA, DANIEL SCOTT	
	<b>Examiner</b>	<b>Art Unit</b>	
	Charlie Peng	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/27/04</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,347,174 to Onishi et al. Onishi et al. teach an optical fiber having an outer hermetic tube layer (91) and a core (101) with diameters ranging 4.1 to 4.9  $\mu\text{m}$  and a F-doped cladding layer (102) with diameters ranging 124 to 126  $\mu\text{m}$ . (Fig. 5) The D/d ratio ranges from 25.5 to 30.5. Onishi et al. use a higher-refractive-indexed Ge-doped silica core instead of pure silica core. Both materials are well known in the art to be used to manufacture portions of optical fibers (Depressed-Clad Fibers or Plastic-Clad Fibers). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use pure silica, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. The motivation would be to remove a step of doping the silica and make the manufacturing process cheaper and less time-consuming.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,347,174 to Onishi et al as applied to claim 1 above. Onishi et al. disclosed the claimed invention except for a particular range for the value of D/d. It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to conduct experiments and find the optimal range, since it has been held where the general conditions of a claim are disclosed, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. The motivation could be to create optical fibers of optimum rigidity, flexibility, etc.

3. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi in view of Hecht. Onishi teaches the optical fiber, its composition and the D/d ratio as applied to the rejection claim 1-4 above, but Onishi is silent on a process by which the optical fiber is made. MCVD is a well-known approach for manufacturing optical fibers and Hecht described the MCVD process where multiple fine layers of different refractive indices (to distinguish core and cladding) are deposited on the inner wall of a glass tube, and a final step to collapse the tube into a preform. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use pure silica, since it has been held to be within the general skill of a worker in the art to use the MCVD process to manufacture the optical fiber. The motivation would be to execute precise control, layer-by-layer, over how the cladding and core are doped and their respective thicknesses/diameters.

4. Referring to claim 6, phosphorus-doped silica is known in the art to have a higher refractive index than pure silica. It would have been obvious to one having ordinary skill in the art at the time the invention was made to deposit a few layer of P-doped silica, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of

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obvious design choice. In re Leshin, 125 USPQ 416. The motivation would be to maximize the refractive index difference between the cladding (F-doped silica) and the tube layer (P-doped silica).

### ***Conclusion***


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,868,734 to Soufiane et al.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charlie Peng whose telephone number is (571) 272-2177. The examiner can normally be reached on 8:30 am - 5 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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